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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/522,185	03/09/2000	Henry Li	36713/CAG/B600	2282
23363	7590	01/30/2006	EXAMINER	
CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			MOORE, IAN N	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/522,185		LI ET AL.	
	Examiner		Art Unit	
	Ian N. Moore		2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,26,38-49,74,91 and 175-178 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,9-11,26,38-43,45-49,74,91 and 175-178 is/are rejected.
- 7) ☒ Claim(s) 7,8,12 and 44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In page 1, lines 2-4 of the specification recites, "The present application is the continuation-in-part of co-pending application No. 09/454,219 filed December 9, 1999..." It is suggested to update the status of referenced co-pending U.S. application as **"issued as US Patent No. 6,882,711"**.

Appropriate correction is required.

Claim Objections

2. Claims 26,46,74 and 175 are objected to because of the following informalities:

Claim 26 recites, "...exchanging voice signal between a first telephony device and a packet based network **1**;

a full duplex data exchange for exchanging data signals from a second telephony device **2** with demodulated data signals from the packet based network, wherein the full duplex data exchanges demodulates the data signal from the first telephony device...outputs the remodulated data signals to the first telephony device **3**..." in lines 3-15.

In accordance with label 1, **a first telephony device** exchanges voice signal. In accordance with label 2, **a second telephony device** exchanges data signal. It is unclear, in accordance with label 3, whether **data signal** are transmitted/received from the first telephony device or second telephony device. It is unclear a first telephony device exchanges voice signal, and yet it also transmits/receives data signal.

Claim 74 is also objected for the same reason as stated above.

Appropriate correction is required.

Claim 46 recites, “a DTMF signal” in line 3 and 6. It is unclear whether “a DTMF signal” in line 6 is the same signal as recited in line 3.

Claim 175 recites, “a voice signal”, “a fax signal”, and “a data signal” in lines 7-8 and 9,11, and 13. It is unclear whether a voice signal”, “a fax signal”, and “a data signal” in line 9,11 and 13 are the same signals as recited in lines 7-8.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,3,26,45,47-49,74,91, and 175-178 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guy (US005187591A) in view of Bartholomew (US006292479B1).

Regarding Claims 1, 26, 49 and 74, Guy discloses a signal processing system (see FIG. 1 (for transmitter) and FIG. 5 (for receiver) of system of processing information; see col. 2, line 54-65), comprising:

a voice exchange (see FIG. 1, Aural module 104 (for transmitter), and FIG. 5 (for receiver)) for exchanging voice signals (see FIG. 1, analog voice signal 100) between a first telephony device (see FIG. 1, source of aural information 102 such as telephone; see col. 2, line

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64 to col. 3, line 1; see col. 3, line 15-20; 39-56) and a network (see FIG. 2, a network that connects to multiplexer 46; see col. 6, line 15-19);

a full duplex data exchange (see FIG. 1, a combined system of Modulated data module 104 (for transmitter), see FIG. 5 (for receiver)) for exchanging data signals (see FIG. 1, modem 128) from a second telephony device (see FIG. 1, personal computer 126; see col. 2, line 67 to col. 4, line 16) with demodulated data signals from the local/line network (see FIG. 2, demodulator 24 (at transmitter) is sends to the receiver; see col. 3, line 59 to col. 5, line 15; and see FIG. 5, demodulated data is received from the transmission network (at receiver); see col. 6, line 19-37), wherein the duplex data exchange demodulates the data signals from the first telephony device (see FIG. 2, transformer 22 and packetizer 36 (at transmitter) transforms and packetizes data signals; see col. 3, line 59 to col. 5, line 15), outputs the demodulated data signals to the packet based network (see FIG. 2, transformed and packetized data signals are sent to a network via line 50; see col. 6, line 15-19), remodulates the demodulated data signals from the network (see FIG. 5, depacketizer 64 and transformer 68; the receiver depacketizes and re-transforms the received signal; see col. 6, line 19-62), and outputs the remodulated data signals to the first telephony device (see FIG. 5, depacketized and transformed signal is sent toward the source of aural information 102; see col. 6, line 19-62; see col. 2, line 64 to col. 3, line 1; see col. 3, line 15-20; 39-56); and

a Call discriminator (see FIG. 2, Discriminator 20), for selectively enabling at least one of the voice exchange and the data exchange (see FIG. 1-2, aural module and modulator/demodulator module; see col. 3, line 59 to col. 5, line 46).

Guy does not explicitly disclose a packet based network. However, utilizing a packet based network such as Internet, ATM, or equivalents thereof, as a transmission medium for voice, data, and fax information is so well known in the art. In particular, Bartholomew teaches a signal processing system (see FIG. 3, Gateway 20 a-b) exchanging signals between telephony devices (see FIG. 3, 11 a-c) over a packet based network (see FIG. 3, Internet 50); see col. 9, line 15 to col. 10, line 20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a packet based network (i.e. Internet) for transmission, as taught by Bartholomew in the system of Guy, so that it would be economical, especially for long distance calls, compared with the toll rates charged by long distance interexchange carriers; see Bartholomew col. 5, line 17-30.

Regarding Claim 3, the combined system of Guy and Bartholomew the packet based network as disclosed above in claim 1. Guy further discloses wherein the data signals from the network line are modulated by a voiceband carrier (see FIG. 2, source of modulated data 14 of fax/modem signals are modulated within voice band carrier; see col. 1, line 65 to col. 2, line 2; see col. 3, line 40-50;), and

the data exchange comprises a data pump (see FIG. 2, demodulator 24 at transmit side and modulator 70 at the receive side) for demodulating the data signals from the network line for transmission on the network (see col. 4, line 6-67; demodulates fax/modem signals from telephony/data line for transmission towards a network) and remodulating the data signals from the transmission network with the voice/aural/telephony carrier for transmission on the network/local line (see FIG. 5, modulator 70 of receiver re-modulates received data signals with voice/aural/telephony carrier for transmission on the telephony/data line); see col. 6, line 19-62).

Regarding Claim 45, the combined system of Guy and Bartholomew discloses all limitation as disclosed above in claim 26. Guy discloses a voice encoder for encoding voice signals from the first telephony device into voice signal packet for the network (see FIG. 2, CODEC 16 and packetizer/depaketizer 118/64; see col. 3, line 45-59).

Regarding Claim 47, the combined system of Guy and Bartholomew discloses all limitation as disclosed above in claim 26. Guy discloses a fax exchange ((see FIG. 1, a combined system of Modulated data module 104 (for transmitter), see FIG. 5 (for receiver)) for exchanging fax signals (see FIG. 1, Fax signal 114) from a third telephony device (see FIG. 1, Fax 110) with demodulated fax signals from local/line network (see FIG. 2, demodulator 24 (at transmitter) is sends to the receiver; see col. 3, line 59 to col. 5, line 15; and see FIG. 5, demodulated data is received from the transmission network (at receiver); see col. 6, line 19-37), wherein the call discriminator (see FIG. 2, Discriminator 20) selectively enables the fax exchange (FIG. 1-2, modulator/demodulator module for fax; see col. 3, line 59 to col. 5, line 46).

Regarding Claim 48 and 91, the combined system of Guy and Bartholomew the packet based network as disclosed above in claim 26. Guy further discloses wherein the fax signals from the third telephony device are modulated by a voiceband carrier (see FIG. 2, source of modulated data 14 of fax/modem signals are modulated within voice band carrier; see col. 1, line 65 to col. 2, line 2; see col. 3, line 40-50;), and

the data exchange comprises a data pump (see FIG. 2, demodulator 24 at transmit side and modulator 70 at the receive side) for demodulating the fax signals from the third telephony device for transmission on the transmission network (see col. 4, line 6-67; demodulates fax/modem signals from telephony/data line for transmission towards a network) and

remodulating the demodulated the fax signals from the transmission network with the voice/aural/telephony carrier for transmission to the third telephony device (see FIG. 5, modulator 70 of receiver re-modulates received data signals with voice/aural/telephony carrier for transmission on the telephony/data line); see col. 6, line 19-62).

Regarding Claim 175, Guy discloses a method for interfacing a plurality of telephony devices (see FIG. 1, Fax 110, Telephone/source of aural information 102, modem 128) with a network (see FIG. 2, a network that connects to multiplexer 46; see col. 6, line 15-19), the network adapted for transmission of packetized signals (see FIG. 1, packetizer 118 and multiplexer 122), the method comprising:

depacketizing an incoming packetized signal from the network (see FIG. 5, Depacketizer 64; see col. 6, line 19-62);

identifying the depacketized signal (see FIG. 5, Depacketizer 64) as a voice signal (see FIG. 1, Telephone/source of aural information 102), a fax signal (see FIG. 1, Fax 110), or a data signal (see FIG. 1, modem 128); see col. 2, line 60 to col. 3, line 16; see col. 6, line 19-62;

if the depacketized signal is a voice signal, performing a voice mode signal processing on the voice signal (see FIG. 5, transformer of a aural information 68 and controller 68; see col. 6, line 19-62);

if the depacketized signal is a fax signal, performing a fax relay mode signal processing (see FIG. 5, Modulator 70 and controller 66; see col. 6, line 19-62);

if the depacketized signal is a data signal, performing data modem relay mode signal processing (see FIG. Modulator 70 and controller 66; see col. 6, line 19-62); and

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transmitting the depacketized processed signal to a corresponding type of telephony device the plurality telephony devices (see FIG. 1 and 5; see col. 6, line 19-62; the recover of original signal is send to corresponding Telephone, fax or modem).

Guy does not explicitly disclose a packet based network. However, utilizing a packet based network such as Internet, ATM, or equivalents thereof, as a transmission medium for voice, data, and fax information is so well known in the art. In particular, Bartholomew teaches a signal processing system (see FIG. 3, Gateway 20 a-b) exchanging signals between telephony devices (see FIG. 3, 11 a-c) over a packet based network (see FIG. 3, Internet 50); see col. 9, line 15 to col. 10, line 20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a packet based network (i.e. Internet) for transmission, as taught by Bartholomew in the system of Guy, so that it would be economical, especially for long distance calls, compared with the toll rates charged by long distance interexchange carriers; see Bartholomew col. 5, line 17-30.

Regarding Claim 176, Guy discloses wherein the plurality of telephony devices include one or more of analog and digital telephone (Telephone/source of aural information 102), analog fax machines (see FIG. 1, fax 110), data modem (see FIG. 1, modem 128).

Regarding Claim 177, Bartholomew discloses wherein the packet based network is the Internet (see FIG. 3, Internet 50); see col. 9, line 15 to col. 10, line 20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a packet based network (i.e. Internet) for transmission, as taught by Bartholomew in the system of Guy, for the same motivation as stated above in claim 175.

Regarding Claim 178, Guy discloses a method for integrated interfacing a plurality of telephony devices (see FIG. 1, Fax 110, Telephone/source of aural information 102, modem 128 at the transmitting side) to a network (see FIG. 2, a network that connects to multiplexer 46; see col. 6, line 15-19), the network adapted for transmission of packetized signals (see FIG. 1, packetizer 118 and multiplexer 122), the method comprising:

packetizing a voice signal (see FIG. 1, Telephone/source of aural information 102), a fax signal (see FIG. 1, Fax 110), or a data signal (see FIG. 1, modem 128; see col. 2, line 60 to col. 3, line 16) in a packetization engine (see FIG. 1, packetizer 36) to generate a packetized signal (see FIG. 2, a packetized signal transmitted by multiplexer 48; see col. 3, line 1 to col. 4, line 55; see col. 5, line 45 to col. 6, line 18); and

transmitting the packetized signal over the network to a far end telephony device (see FIG. 1, Fax 110, Telephone/source of aural information 102, or modem 128 at the remote/receiving side; see col. 2, line 60 to col. 3, line 16; also see FIG. 5 for receiving side; see col. 6, line 19-62).

Guy does not explicitly disclose a packet based network. However, utilizing a packet based network such as Internet, ATM, or equivalents thereof, as a transmission medium for voice, data, and fax information is so well known in the art. In particular, Bartholomew teaches a signal processing system (see FIG. 3, Gateway 20 a-b) exchanging signals between telephony devices (see FIG. 3, 11 a-c) over a packet based network (see FIG. 3, Internet 50); see col. 9, line 15 to col. 10, line 20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a packet based network (i.e. Internet) for transmission, as taught by Bartholomew in the system of Guy, so that it would be economical,

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especially for long distance calls, compared with the toll rates charged by long distance interexchange carriers; see Bartholomew col. 5, line 17-30.

5. Claims 4-6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guy in view of Bartholomew as applied to claim 1 above, and further in view of Ohlsson (US006452950B1).

Regarding Claims 4 and 9, the combined system of Guy and Bartholomew discloses all limitation as set forth above in claim 1.

Neither Guy nor Bartholomew explicitly disclose a jitter buffer for receiving packets of varying delay and compensating for the delay variation of packets. However, Ohlsson discloses a jitter buffer (see FIG. 2A-B, a combined system of Jitter buffer 10 and CPU/processor) for receiving packets of varying delay from the packet based network (see col. 1, line 65-66; see col. 2, line 29-32; Internet, or packet communication system) and compensating for the delay variation of packets (see col. 2, line 20-56; see col. 5, line 25 to col. 7, line 66). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a jitter buffer for delay varying and compensation, as taught by Ohlsson, in the combined system of Guy and Bartholomew, so that it would provide a smooth data feed to an application without excessive delays, and the use of network bandwidth more intelligently; see Ohlsson col. 1, line 63-67; see col. 2, line 20-39.

Regarding Claims 5 and 10, the combined system of Guy, Bartholomew and Ohlsson discloses all limitation as set forth above in claims 1 and 4.

Neither Guy nor Bartholomew explicitly discloses a jitter buffer outputs an isochronous stream. However, Ohlsson discloses a jitter buffer (see FIG. 2A-B, a combined system of Jitter buffer 10 and CPU/processor) outputs an isochronous stream (see col. 2, line 20-56; see col. 5, line 25 to col. 7, line 66; jitter buffer transmits/outputs the sequential/continuous stream of data). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a jitter buffer for delay varying and compensation for sequential/continuous stream of data, as taught by Ohlsson, in the combined system of Guy and Bartholomew, so that it would provide a smooth data feed to an application without excessive delays, and the use of network bandwidth more intelligently; see Ohlsson col. 1, line 63-67; see col. 2, line 20-39.

Regarding Claim 6, Guy discloses wherein the data pump transmits the received data signals to the network line at a transmit rate (see FIG. 5, modulator 70 of receiving side transmits with a transmit rate the received data signals towards the telephony/data line); see col. 6, line 19-62.

Regarding Claim 11, the combined system of Guy, Bartholomew and Ohlsson discloses all limitation as set forth above in claim 1 and 9. Ohlsson discloses a jitter buffer comprises a voice queue which buffer the received voice signals (see FIG. 2A-B, Jitter buffer 10 queues the voice signals) for a holding time and a voice synchronizer (see FIG. 2A, CPU/processor) which adaptively adjusts the holding time of the voice queue (see col. 2, line 20-56; see col. 5, line 25 to col. 7, line 66). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a jitter buffer for queuing and processor for controlling jitter buffer holding time, as taught by Ohlsson, in the combined system of Guy and

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Bartholomew, so that it would provide a smooth data feed to an application without excessive delays, and the use of network bandwidth more intelligently; see Ohlsson col. 1, line 63-67; see col. 2, line 20-39.

6. Claims 38-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guy in view of Bartholomew as applied to claim 26 above, and further in view of Elliott (US006614781B1).

Regarding Claims 38 and 40, the combined system of Guy and Bartholomew discloses all limitation as set forth above in claim 26. Guy discloses a voice decoder for decoding packets of the voice signal (see FIG. 2, CODEC 16 and packetizer/depacketizer 118/64; see col. 3, line 45-59).

Neither Guy nor Bartholomew explicitly disclose a voice activity detector, which detects the voice signals without speech, or lost voice signal, and a comfort noise generator/recovery, which inserts comfort noise in place of the voice signals without speech, or process the voice signal to compensate for the lost voice signal. However, Elliott discloses a voice decoder for decoding packets of the voice signals (see col. 67, line 20-40; CODEC),

a voice activity detector which detects the voice signals without speech or lost voice signal (see FIG. 11B, silent detection 1150; see FIG. 11C, delay for jitter 1124; see col. 67, line 1-36; 53-55) and

a comfort noise generator/recovery engine which inserts comfort noise in place of the voice signals without speech, or process the voice signal to compensate for the lost voice signal (see FIG. 11C, 1124, 1126; inserting comfort noise for silent interval thereby recovering the lost

signal; see col. 67, line 52 to col. 68, line 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide inserting comfort noise for a silent interval, as taught by Elliott, in the combined system of Guy and Bartholomew, so that it voice traffic can be transmitted transparently over a packet switched data network; see Elliott col. 4, line 11 to col. 7, line 25.

Regarding Claim 39, the combined system of Guy, Bartholomew and Elliott discloses all limitation as set forth above in claim 26 and 38. Elliott further discloses a comfort noise estimator which generates comfort noise parameters from at least a portion of the voice signals without speech (see FIG. 11B, silent detection 1150; see FIG. 11C, 1124, 1126; generating comfort noise for silent interval (i.e. a portion without speech)), the comfort noise generator being responsive to the comfort noise parameters (see col. 67, line 1-36; 53-55; see col. 67, line 52 to col. 68, line 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to generate comfort noise for a silent interval, as taught by Elliott, in the combined system of Guy and Bartholomew for the same motivation as stated above in claim 38.

Regarding Claim 41, the combined system of Guy and Bartholomew discloses all limitation as set forth above in claim 26. Guy discloses a voice decoder for decoding packets of the voice signal (see FIG. 2, CODEC 16 and packetizer/depacketizer 118/64; see col. 3, line 45-59).

Neither Guy nor Bartholomew explicitly discloses a voice activity detector, which suppress the voice signals without speech. However, Elliott discloses a voice encoder for encoding packets of the voice signals (see col. 67, line 20-40; CODEC),

a voice activity detector which suppress the voice signals without speech (see FIG. 11B, silent detection/suppressing 1150; see col. 67, line 1-36; 53-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide suppressing silent interval, as taught by Elliott, in the combined system of Guy and Bartholomew, so that it voice traffic can be transmitted transparently over a packet switched data network; see Elliott col. 4, line 11 to col. 7, line 25.

Regarding Claim 42, the combined system of Guy, Bartholomew and Elliott discloses all limitation as set forth above in claim 26 and 41. Elliott further discloses a comfort noise estimator that generates comfort noise parameter when the voice activity detector suppress the voice signals without speech (see FIG. 11C, 1124,1126; generating comfort noise for suppressed silent interval; see col. 67, line 52 to col. 68, line 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to generate comfort noise for a suppressed silent interval, as taught by Elliott, in the combined system of Guy and Bartholomew for the same motivation as stated above in claim 41.

Regarding Claim 43, the combined system of Guy and Bartholomew discloses all limitation as set forth above in claim 26. Guy discloses a voice decoder for decoding packets of the voice signal (see FIG. 2, CODEC 16 and packetizer/depaketizer 118/64; see col. 3, line 45-59).

Neither Guy nor Bartholomew explicitly discloses an echo canceller for canceling decoded voice signals echoes. However, Elliott discloses a voice decoder for decoding packets of the voice signals (see FIG. 11C, see col. 67, line 20-40; CODEC),

an echo canceller for canceling decoded voice signals echoes (see FIG. 11C, cancel echo 1130; see col. 67, line 1-36; 53-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide suppressing silent interval, as taught by Elliott, in the combined system of Guy and Bartholomew, so that the voice traffic can be transmitted transparently over a packet switched data network; see Elliott col. 4, line 11 to col. 7, line 25.

7. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guy in view of Bartholomew as applied to claim 26 and 45 above, and further in view of Oran (US006775265B1).

Regarding Claim 46, the combined system of Guy and Bartholomew discloses all limitation as set forth above in claim 26 and 45.

Neither Guy nor Bartholomew explicitly discloses a tone exchange comprising a DTMF detector for detecting a DTMF signal and generating a DTMF packet for the network response the DTMF signal, the DTMF detector muting the voice signal packets when a DTMF signal is detected.

However, Oran discloses a tone exchange comprising a DTMF detector (see FIG. 4, DTMF detector 40 and see FIG. 6, DTMF generator 54) for detecting a DTMF signal from the first telephony device and generating a DTMF packet for the packet based network response the DTMF signal, the DTMF detector muting the voice signal packets when a DTMF signal is detected (see FIG. 4-6; abstract; see col. 3, line 16-29; see col. 4, line 30-46). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

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provide a DTMF detector and muting process, as taught by Oran, in the combined system of Guy and Bartholomew, so that it would accurately detect and transmit DTMF without adding additional end-to-end delay to the packet network; see Oran col. 3, line 1-29.

Allowable Subject Matter

8. Claims 7,8,12 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments with respect to claims 1,3-6,9-11,26,38-43,45-49,74,91,175-178 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

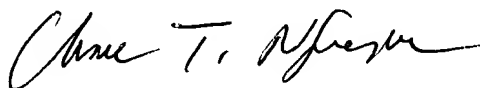
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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